**2.3 – VSEPR Theory – Practice Time!!**

1. For the following molecules or ions, complete the chart:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Molecule/Ion | Lewis Structure | e-group geometry | VSEPR Notation | Molecular Geometry | Diagram (of molecular geo) |
| a) N2 | n2.JPG | Linear | n/a | Linear | a.JPG |
| b) HCN | hcn.JPG | Linear | AX2 | Linear | b.JPG |
| c) NH4+ | nh4.JPG | Tetrahedral | AX4 | Tetrahedral | c.JPG |
| d) NO3- | no3.JPG | Trigonal Planar | AX3 | Trigonal Planar | d.JPG |
| e) NSF | nsf.JPG | Trigonal Planar | AX2E | Angular (bent) | e.JPG |

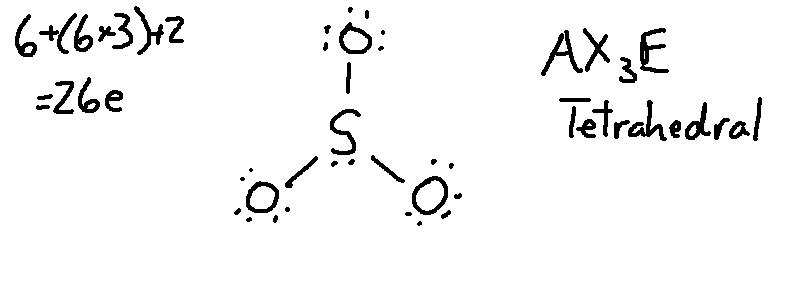
2. Which one of the following ions has a *trigonal planar* shape? Explain.

a) SO3-2

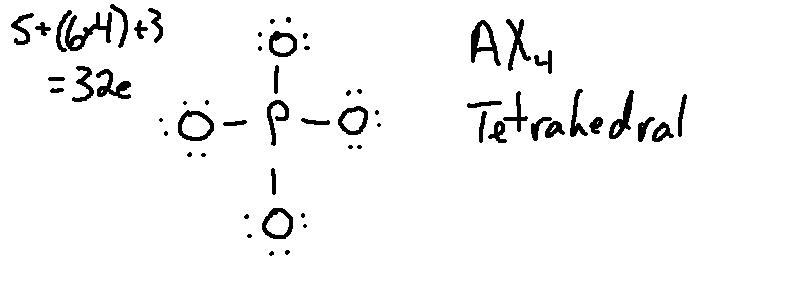
b) PO4-3

c) PF6-

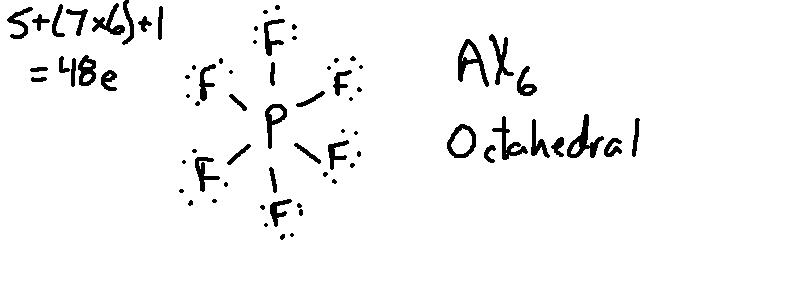
d) CO3-2



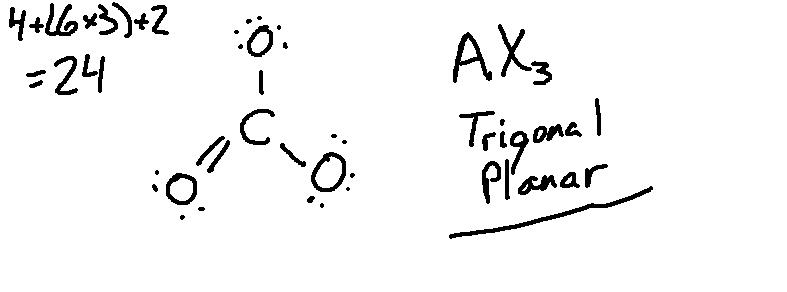
a)



b)



c)



d)